ABSTRACT

Histone deacetylase is a metallo-enzyme with zinc at the active site. Compounds having a zinc-binding moiety, such as, for example, a hydroxamic acid group or a carboxylic acid group, can inhibit histone deacetylase. Histone deacetylase inhibition can repress gene expression, including expression of genes related to tumor suppression. Accordingly, inhibition of histone deacetylase can provide an alternate route for treating cancer, hematological disorders, e.g., hemoglobinopathies, and genetic related metabolic disorders, e.g., cystic fibrosis and adrenoleukodystrophy.

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